



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/529,653

11/10/2005

Tadashi Maruno

046124-5376

1625

55694 7590 02/28/2007
DRINKER BIDDLE & REATH (DC)
1500 K STREET, N.W.
SUITE 1100
WASHINGTON, DC 20005-1209

EXAMINER

BOOSALIS, FANI POLYZOS

ART UNIT

PAPER NUMBER

2884

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

02/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/529,653

Applicant(s)

MARUNO ET AL.

Examiner

Faye Boosalis

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 November 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/05, 1/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Talmi et al (US 5,821,547 A)* in view of *Nishizawa et al (US 4,471,228)*.

Regarding claims 1-2, Talmi discloses a fluorescence measuring apparatus for emitting a plurality of excitation pulse components (synchronized signals) towards a specimen (305) (sample chamber) and for measuring fluorescent components emitted from the specimen corresponding to the respective excitation pulse components (See Generally Fig. 3 and col. 4, lines 18-34), the fluorescence measuring apparatus comprising: a photoelectric converter (306) for implementing photoelectric conversion of a fluorescent component emitted from the specimen (305) (See Generally Fig. 3 and col. 4, lines 49-57); a charge storage element (307) for storing a charge resulting from the photoelectric conversion by the photoelectric converter and for transferring the charge stored (col. 5, lines 21-33); and a controller (302) for controlling the time at which the CCD begins accumulating charge and time at which the charge is transferred (See Fig. 3 and col. 3, lines 6-14) and wherein the controller outputs electronic signal corresponding to each excitation pulse component, outputs the readout signal corresponding to output of the signal and outputs the transfer signal per at least two

readout signals outputted (col. 3, lines 6-14 and col. 5, lines 21-40). Talmi is silent with regards to a controller outputting an electronic shutter signal. Nishizawa discloses a solid-state image sensor with exposure controller comprising: a controller (102) for outputting an electronic shutter signal for sweeping away the charge resulting from the photoelectric converter (100) and a readout signal for reading the charge resulting from the photoelectric conversion, into a charge storage element (col. 6, lines 43-68 and col. 7, lines 1-5). Thus, it would have been obvious to a person having ordinary skill in the art to modify Talmi et al to output electronic shutter signals for sweeping away charge results from the converter so as to enable a sequential charge transfer, as taught by Nishizawa.

Regarding claim 2, Talmi discloses the excitation pulse components (303) and the fluorescent components are substantially identical waveform and identical period (col. 4, lines 36-57).

Regarding claim 3, Talmi discloses wherein the controller outputs electronic signal and readout signal to enable measurement of identical waveform part in each fluorescent component (col. 4, lines 26-30).

Regarding claim 4, Talmi discloses wherein the controller (302) outputs electronic signal and transfer signal consecutively before emission of the fluorescence components (See Generally Fig. 3 and col. 4, lines 26-35).

Regarding claim 5, Talmi discloses wherein the charge storage element comprises a first charge storage element for directly receiving the charge from the photoelectric converter and a second charge storage element for receiving the charge

Art Unit: 2884

from the first charge storage element (Fig. 3 and col. 5, lines 21-35), and wherein controller outputs the transfer signal per predetermined number of readout signals outputted, to the first charge storage element consecutively outputting the transfer signal to the second charge storage element (Fig. 3 and col. 5, lines 25-40).

Conclusion

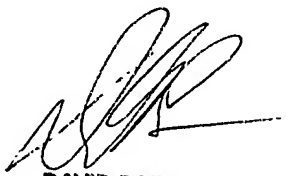
3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Faye Boosalis whose telephone number is 571-272-2447. The examiner can normally be reached on Monday thru Friday from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2884

5. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FB



DAVID PORTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800